

What is claimed is:

1. A method of fabricating an integrated color filter for a liquid crystal display (LCD), comprising:
  - providing a substrate;
  - forming respective gate lines and signal lines on the substrate, wherein the plurality of gate lines and signal lines define respective pixel areas;
  - forming a plurality of switching elements electrically connected to the signal lines and gate lines for the pixel areas;
  - forming a protruding pattern on the gate lines, the signal lines and the switching elements to define respective color filter unit areas;
  - applying colored resin to form respective color filter units in the color filter unit areas defined by the protruding portion; and
  - forming respective pixel electrodes on the respective color filter units.
2. The method as claimed in claim 1, wherein the substrate is an insulator.
3. The method as claimed in claim 1, wherein the switching elements are thin film transistors.
4. The method as claimed in claim 1, wherein the protruding pattern is made of organic material.
5. The method as claimed in claim 1, wherein the protruding pattern is a composite of polyimide, carbon black and novolak resin.
6. The method claimed in claim 1, wherein the protruding pattern comprises respective contact holes exposing parts of corresponding switching elements.

7. The method as claimed in claim 6, wherein the pixel electrodes electrically connect to corresponding switching element via the contact holes.

8. The method as claimed in claim 1, wherein the protruding pattern is patterned by photolithography.

9. The method as claimed in claim 1, wherein the gate lines and signal lines are substantially made of opaque conductive materials.

10. The method as claimed in claim 1, wherein the pixel electrodes are substantially made of transparent conductive materials.

11. The method as claimed in claim 1, wherein the colored resin is applied by ink-jet printing.

12. An integrated color filter for a liquid crystal display (LCD), comprising:

a substrate;

a pixel matrix comprised of a plurality of gate lines and signal lines formed on the substrate, wherein the gate lines and signal lines define respective pixel areas;

respective switching elements for each of the pixel areas electrically connected to the signal lines and gate lines;

a protruding pattern formed on the gate lines, the signal lines and the switching elements and defining respective color filter unit areas;

respective color filter units formed in said respective color filter unit areas;

and

respective pixel electrodes formed on the respective color filter units.

13. The integrated color filter as claimed in claim 12, wherein the substrate is an insulator.

14. The integrated color filter as claimed in claim 12, wherein the switching elements are thin film transistors.

15. The integrated color filter as claimed in claim 12, wherein the protruding pattern is made of organic material.

16. The integrated color filter as claimed in claim 12, wherein the protruding pattern is a composite of polyimide, carbon black and novolak resin.

17. The integrated color filter as claimed in claim 12, wherein the protruding pattern comprises respective contact holes exposing parts of corresponding switching elements.

18. The integrated color filter as claimed in claim 17, wherein the pixel electrodes electrically connect to corresponding switching elements via the contact holes.

19. The integrated color filter as claimed in claim 12, wherein the protruding pattern is comprised of a photoresist material.

20. The integrated color filter as claimed in claim 12, wherein the gate lines and signal lines are substantially made of opaque conductive materials.

21. The integrated color filter as claimed in claim 12, wherein the pixel electrodes are substantially made of transparent conductive materials.

22. The integrated color filter as claimed in claim 12, wherein the color filter units are formed by ink-jet printing.

23. The integrated color filter as claimed in claim 12, wherein each of said switching elements further comprising:

a gate electrode extending from a gate line;

a gate insulating layer formed on the gate electrodes; and  
a pair of source and drain electrodes formed on the gate insulating layer  
above the gate electrode to form a thin film transistor.